

Canberra  
Grammar  
School



AN INDEPENDENT ANGLICAN SCHOOL

# The Snow Centre

For Education in the Asian Century

JACKSON  
ARCHITECTURE



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# 01 ■ Welcome

The Snow Centre for Education in the Asian Century is the extraordinary gift of Canberra Grammar School Old Boy, entrepreneur and philanthropist, Mr Terry Snow. It reflects his great personal regard for his time at Canberra Grammar School, his family's deep engagement with the School and his life-long commitment to creating institutions of world-class quality in Australia's national capital.

Construction began in December 2013 and was completed in January 2015. The building was officially opened by Mr Terry Snow on 5 March 2015.



# 02. The Building

## Building Design

The Snow Centre For Education in the Asian Century has been designed to allow students and educators the opportunity to learn in an environment that is not limited to the classrooms. There are a range of spaces that have been provided which can creatively adapted to new learning styles.

The building can be broadly divided into two categories of spaces: shared space and classrooms. Some of the key features of these spaces are:

### Shared Space:

Gallery space – located on the ground floor, this area can be used for presentations, exhibitions, pre-function, breakout, collaboration, etc.

Tiered seating – connecting the ground floor and level 1, this space can be used for lectures, presentations, collaboration, informal discussions, etc.

Central stair and atrium – connecting all three levels of the building, the central stair not only provides access to all classrooms it also the ventilation system to operate correctly. The atrium space offers a visual connection between floors and helps to link all the collaboration spaces into one central hub.

Natural light – extensive glazing throughout the building provides high levels of natural light. The central stair and atrium is filled with natural light from the glazed roof vents above.

Natural ventilation – utilising thermal buoyancy and automated louvres, the building is cooled through the night via natural ventilation.





## The Snow Centre For Education in the Asian Century

Smoke exhaust – the automated natural ventilation system also serves as the smoke exhaust system if the fire detection system is triggered.

Flexible learning – a variety of open collaborative spaces are offered throughout the building. These can be used for private study, small group collaboration or informal discussions. The furniture can be moved and arranged to suit individual requirements.

### Classrooms:

Range of sizes – there are a number of different sized classrooms throughout the building including large classrooms for up to 24 students; medium classrooms for up to 16 students; small classrooms for up to 12 students; and study pods for up to 6 students.

Large windows – extensive glazing throughout each classroom provides high levels of natural light and an enhanced connection with the outdoors.

Transparent connection to central space – fully glazed partitions and sliding doors allow each classroom to be visually connected to the main central atrium and circulation spaces, creating an active and energised environment for learning.

Connection to outside spaces – ground level classrooms each have individual external doors to allow learning opportunities to extend beyond the building envelope and into the surrounding landscaped spaces.

Magnetic white boards – each learning space is equipped with a full wall of magnetic whiteboards to allow greater flexibility for students and teachers.

Modular and flexible furniture – individual tables and chairs for each student can be easily reconfigured to suit a range of learning environments.

Video classrooms – there are two dedicated video classrooms on the top floor with an operable wall that can be opened to create a single large classroom. Full height curtains are provided to block external light and attenuate the acoustics.

# 03 ■ Summer Cooling

## Natural Ventilation

This building has been designed to utilise natural ventilation for summertime cooling. Primarily the natural ventilation system will operate during the night when external conditions are favourable. Night purge allows residual heat within the building structure to be dissipated by the continual introduction of cooler outside air, thereby cooling the building structure and fabric.

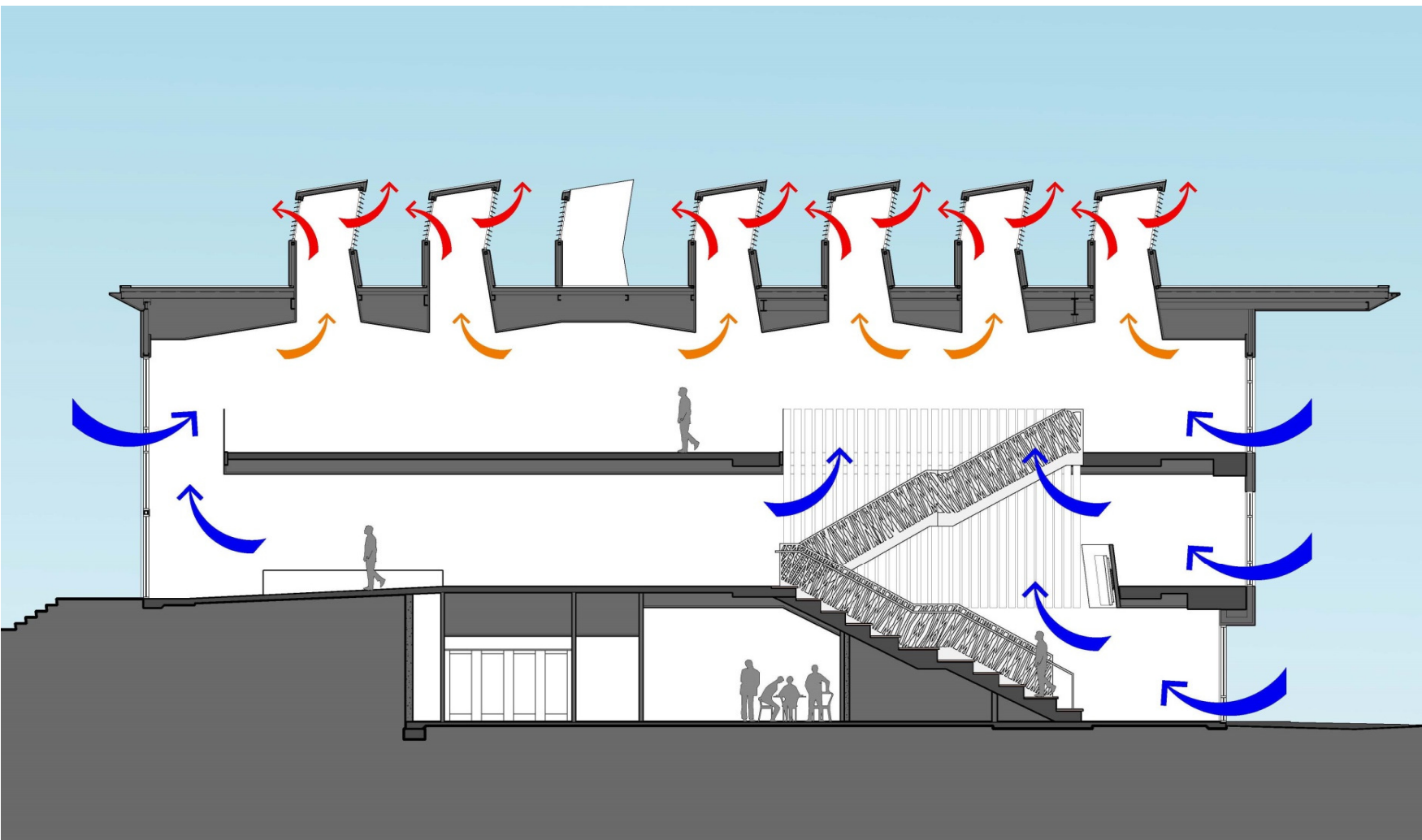
Motorised glass louvres in each classroom and flexible learning space will automatically operate to allow the cooler outside air to flow through each space, up through the central atrium and out through the rooftop ventilation louvres. External weather sensors will determine the suitable external conditions for the system to operate, including temperature, wind and rain sensors.

There is no manual override to individual louvres within classrooms or learning spaces. Teachers and students should not interfere with this system.

## Windows and Ceiling Fans

The automatic natural ventilation system is supplemented with ceiling fans and openable windows. The ceiling fans are controlled via wall mounted remote controls. There are six fan speeds to select from and a "whoosh mode" which simulates the variations in natural airflow for a greater cooling effect.

Openable windows are installed at high level with manual winder mechanism to allow fresh air into the space if required. These windows may be opened at any time of the year and should be shut when the room is vacated as they may interfere with the natural ventilation airflow.





# 04. Winter Heating

## Underfloor Heating

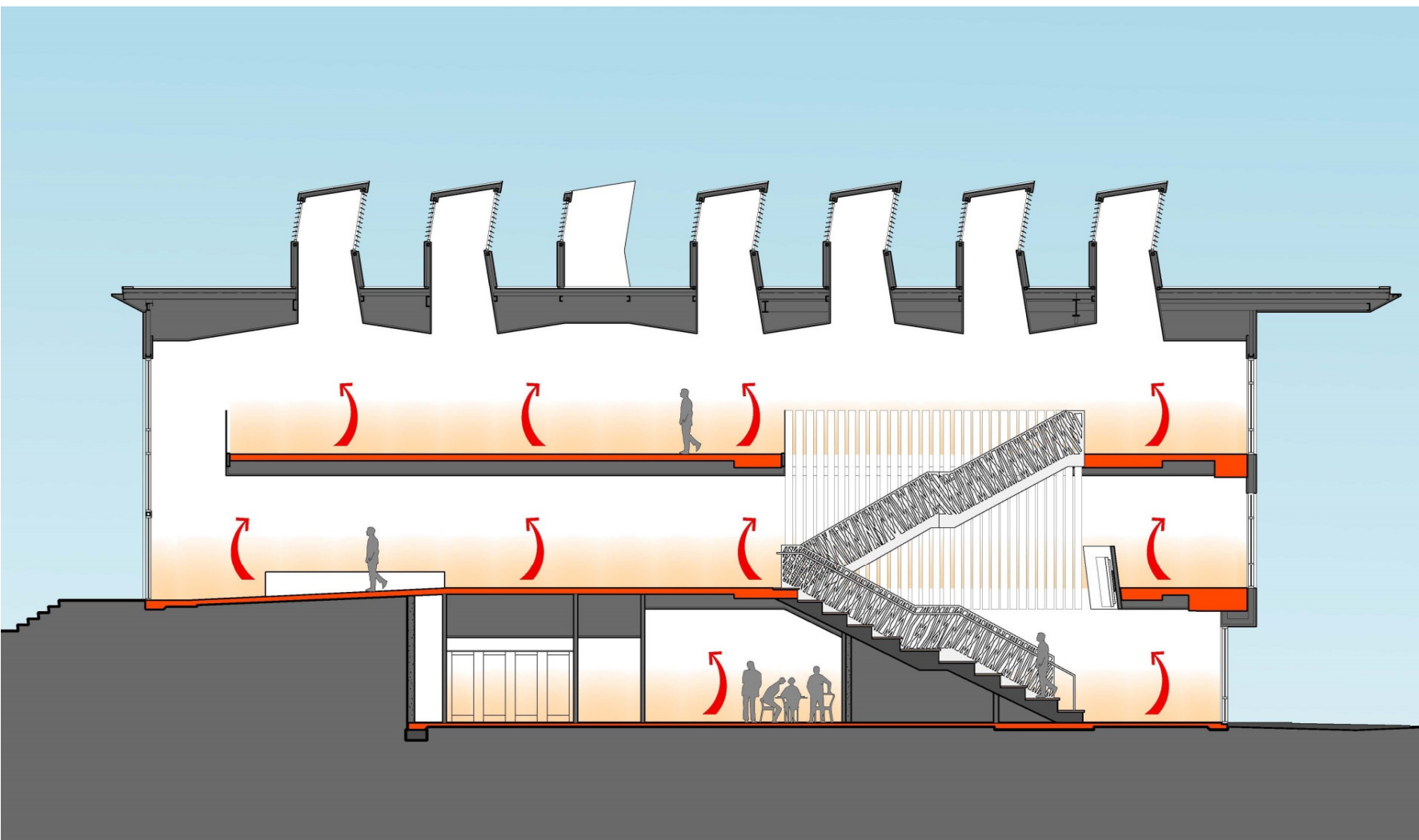
Winter heating is provided through underfloor heating. The underfloor heating system consists of pipework, embedded in the concrete floor slabs, through which low temperature hot water is pumped. Heat is radiated from the floor which warms the air within the room. Thus, an even heat distribution is provided across each floor.

The underfloor heating system will be switched on at an appropriate time of the year. The system takes up to 48 hours to reach operating temperature, so cannot be switched on and off on a daily basis.

## Windows and Ceiling Fans

Temperatures in Canberra can often range by more 20°C between morning and afternoon. Once the underfloor heating system is operating, it may be necessary to utilise the ceiling fans and operable windows to maintain comfort levels on a room by room basis. This may be the case on days with cold mornings and warm afternoons.

The ceiling fans are reversible so that air can be circulated within each room to dissipate any warm air that rises to the ceiling.







## 05. Technology

### Lighting

LED lighting has been used throughout the building to provide energy efficiency and long lamp life. The lighting is controlled by movement sensors in each room to enable further energy savings when the room is not in use. The movement sensors can be manually overridden with the switches located on the wall inside each room. The manual override reverts back to movement sensor after 2 hours.

The main switch for the central areas of the building is located adjacent to the level 1 entry door.

### Wireless Access Points

Wireless access points have been provided throughout the building.

### Audio Visual

Each classroom is equipped with a touch screen LED panel which is controlled via USB input and wireless keyboard and mouse. Ceiling mounted speakers allow audio content to be easily heard within the classroom.

The central atrium space is equipped with multiple LED display panels which are controlled via a portable podium housed below the main stairs. Ceiling mounted speakers allow audio content to be easily heard within the central amphitheatre space.



# 06. Access

## Card Reader Access

All external doors are controlled by card reader access.

## Access for People with a Disability

Access for people with a disability is provided at the main front entrance at ground level and the rear entrance at level 1.

The internal lift provides access between floors and is available if required. The lift is controlled by card reader access.

Accessible toilets are provided on ground level and level 2.





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